Relative Efficiency Appraisal of Iranian Ports Using Data Envelopment Analysis (DEA) Technique

Kiani Moghadam, Mansoor[1]; Jafarzadeh Kenari, Mehdi[2*]; Bakhshi zadeh, Alireza[3]

1- Professor, Chabahar Maritime University, Chabahar, Iran. Email:m.kiani@cmu.ac.ir

2- M.A., Business Administration, Allameh Tabatabaee University, Tehran, Iran. Email:m.j.kenari@gmail.com

3- M.A., Business Administration, Tarbiat Modares University, Tehran, Iran. Email:abakhshizadeh@ymail.com

Abstract

The purpose of present study is to compare the relative efficiency of Iranian ports and identify the efficient ports in 2009 to 2011. Applied-analytical method was used and statistical population includes important Iranian ports. Data are gathered from Port and Maritime Organization of Iran. Data include the years 2009, 2010 and March to November 2011. CCR model is used to determine the efficiency ratio of ports and to distinguish efficient and inefficient ports. For the units that are identified as efficient by CCR model, Anderson–Pearson (AP) was used. For analyzing data, LINGO and SPSS software was used.

Findings showed that in 2009, 36%, in 2010, 27% and in 2011, 27% of main Iranian ports have been efficient. In 2009 and 2010, Bahonar and in 2011, Rajaei ports were recognized as the most efficient Iranian ports.

Finally, virtual ports were introduced as a pattern for inefficient ports. Inefficient ports will achieve efficiency if they can be promoted to achieve the conditions of their similar virtual ports.

Keywords: *Port Industry, Relative Efficiency, Data Envelopment Analysis, Performance Appraisal.*